

California Energy Commission

STAFF REPORT

LOCALIZED HEALTH IMPACTS REPORT

For Selected Projects Awarded Funding Through
the Alternative and Renewable Fuel and Vehicle
Technology Program Under Solicitation GFO-18-
602 – Demonstration-Scale Biofuels Production
Facilities

California Energy Commission

Gavin Newsom, Governor



March 2019 | CEC-600-2019-009

California Energy Commission

Jonathan Bobadilla

Primary Author

Andrew Hom

Project Manager

Elizabeth John

Office Manager

ADVANCED FUEL PRODUCTION OFFICE

Kevin Barker

Deputy Director

FUELS AND TRANSPORTATION DIVISION

Drew Bohan

Executive Director

DISCLAIMER

Staff members of the California Energy Commission prepared this report. As such, it does not necessarily represent the views of the Energy Commission, its employees, or the State of California. The Energy Commission, the State of California, its employees, contractors, and subcontractors make no are warrant, express or implied, and assume no legal liability for the information in this report; nor does any party represent that the uses of this information will not infringe upon privately owned rights. This report has not been approved or disapproved by the Energy Commission nor has the Commission passed upon the accuracy or adequacy of the information in this report.

ABSTRACT

Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007) created the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). This statute, amended by Assembly Bill 109 (Núñez, Chapter 313, Statutes of 2008), authorizes the California Energy Commission to “develop and deploy innovative technologies that transform California’s fuel and vehicle types to help attain the state’s climate change policies.” Assembly Bill 8 (Perea, Chapter 401, Statutes of 2013) reauthorizes the ARFVTP through January 1, 2024.

AB 118 also directs the California Air Resources Board (CARB) to develop guidelines to ensure air quality improvements. The CARB’s Air Quality Improvement Program (AQIP) Guidelines, approved in 2008, are published in the *California Code of Regulations, Title 13, Motor Vehicles, Chapter 8.1, AB 118 Air Quality Guidelines for the Alternative and Renewable Fuel and Vehicle Technology Program*. The guidelines require the California Energy Commission, as the funding agency, to analyze the localized health impacts of ARFVTP-funded projects that require a permit (13 CCR § 2343).

This Localized Health Impacts Report analyzes and reports on the potential health impacts to communities from projects seeking Energy Commission funding. Information submitted by project funding applicant(s) is used in this report to help identify communities at a higher risk of adverse health effects from pollution. As provided by 13 CCR § 2343, this Localized Health Impacts Report is required to be available for public comment for 30 days prior to the approval of projects.

Keywords: Air pollution, air quality improvement program (AQIP), alternative fuels, biofuel infrastructure, biomethane production, California Air Resources Board (CARB), Assembly Bill (AB) 118, California Environmental Quality Act (CEQA), compressed natural gas (CNG), environmental justice indicators (EJ), Environmental Justice Screening Method (EJSM), localized health impacts (LHI)

Please use the following citation for this report:

Bobadilla, Jonathan. 2019. *Localized Health Impacts Report Under Solicitation GFO-18-602 - Demonstration-Scale Biofuels Production Facilities*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2019-009.

TABLE OF CONTENTS

	Page
Abstract	i
Table of Contents	ii
List of Tables	ii
Executive Summary	1
CHAPTER 1: Projects Proposed for Funding	3
Public Comment	4
CHAPTER 2: Project Description	5
California Grinding, Inc. - Thermophilic Demonstration	5
Southern California Gas Company - HYPOWERS	6
Technikon, LLC - Hyper-Phillic RNG Demonstration	6
Oberon Fuels, Inc. - Renewable DME	7
Technology & Investment Solutions - In-Situ Biomethanation	7
CHAPTER 3: Location Analysis	8
Environmental Standard	8
Demographic Standard	8
Analysis Summary	9
GLOSSARY	10
List of Acronyms	12
APPENDIX A: Localized Health Impacts Report Method	A-1

LIST OF TABLES

	Page
Table 1: Project Details Along With EJ Indicators	4
Table 2: California Grinding, Inc. Project Related Emissions	5
Table 3: Technikon, LLC Project-Related Emissions	6
Table 4: EJ Indicators by Project Location City Demographic	9

EXECUTIVE SUMMARY

Under the *California Code of Regulations Title 13, (CCR § 2343)*, this Localized Health Impacts Report (LHI report) describes the alternative fuel infrastructure project proposed for Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) funding that may require a conditional or discretionary permit or environmental review such as conditional use permits, air quality permits, wastewater permits, hazardous waste disposal permits, and other land-use entitlements. This LHI report does not include projects that require only residential building permits, mechanical/electrical permits, or fire/workplace safety permits, as these are outside the scope of this LHI report.

The California Energy Commission is required to assess the local health impacts of projects proposed for ARFVTP funding. This LHI report focuses on the potential health impacts to communities from project-related emissions or pollution. Project locations where communities potentially have a higher risk of adverse health impacts from pollution are identified as *high-risk community project locations*. High-risk communities are identified using demographic data with environmental data for air quality from the California Air Resources Board.

Environmental justice communities, low-income communities, and minority communities are considered the most impacted by any project that could result in increased criteria and toxic air pollutants within an area. Preventing or minimizing health risks from pollution is vital in any community, but it is especially important for communities already considered at high risk due to preexisting poor air quality and other prevalent factors.

The California Energy Commission proposes to fund five demonstration-scale biofuel production projects under Grant Solicitation GFO-18-602. The five applicants selected to receive funding submitted localized health impact information regarding their proposed project site locations. Based on applicant-provided information and staff analysis, the projects in Brawley, Fresno, and Sacramento are in high-risk community project locations. Staff does not anticipate any significant increase in criteria and toxic emissions from implementing any of the proposed projects. There are no expected negative health impacts in the communities where the proposed projects are located.

CHAPTER 1:

Projects Proposed for Funding

On August 7, 2018, the California Energy Commission released a grant solicitation titled “Demonstration-Scale Biofuels Production Facilities” (GFO-18-602) under the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). GFO-18-602 offered ARFVTP grant funding to applicants toward projects that will demonstrate innovative and scalable biofuel production technologies. This Localized Health Impacts Report (LHI report) assesses and reports on the localized health impacts of the proposed projects. A 30-day public review and comment period applies to this LHI report from the date of publishing.

On January 18, 2019, the Energy Commission published a notice of proposed award (NOPA)¹ identifying five applicants recommended by Energy Commission staff for project funding. The projects proposed for grant funding under GFO-18-602 are in Table 1 by proposed awardee.

Environmental justice communities, low-income communities, and minority communities are considered the most impacted by any project that could result in increased criteria and toxic air pollutants within an area. Preventing or minimizing health risks from pollution is vital in any community, but it is especially important for communities already considered at high risk due to preexisting poor air quality and other prevalent factors. The definitions for the environmental justice (EJ) indicators² used in Table 1 are in Appendix A of this LHI report.

¹ https://www.energy.ca.gov/contracts/GFO-18-602_NOPA.pdf.

² EJ indicators developed by the United States Environmental Protection Agency (U.S. EPA), Office of Policy. Available at <https://www.epa.gov/ejscreen/environmental-justice-indexes-ejscreen>.

Table 1: Applicant Details With EJ Indicators

Applicant	Project Title	Proposed Project Location	EJ Indicator(s)
California Grinding, Inc.	Thermophilic Bacterial Pretreatment of Organic Feedstocks Demonstration	3077 South Golden State Frontage Blvd Fresno, CA 93725	Poverty, Minority, and Unemployment
The Southern California Gas Company (SoCalGas)	Hydrothermal Processing of Wastewater Solids (HYPOWERS) Demonstration Facility	5019 Imhoff Place Martinez, CA 94553	None
Technikon, LLC	Hyper-Philic AD Demonstration of Green Waste Conversion to Renewable Natural Gas for Fueling Station	8550 Fruitridge Road Sacramento, CA 95826	Poverty and Minority
Oberon Fuels, Inc.	Renewable DME: Pathway to Zero-Emission Vehicles	5451 Kershaw Rd, Brawley, CA 92227	Poverty, Minority, and Unemployment
Technology & Investment Solutions	In-Situ Biomethanation in Food Waste Digesters Using CO2 and Catalytically Derived Hydrogen From Biogas	17900 Sheep Creek Road Phelan, CA	Minority

Source: California Energy Commission staff

Public Comment

As provided by Title 13, Section 2343 of the California Code of Regulations, a 30-day public review period applies to this LHI report from the date it is posted on the Energy Commission website. The original posting date for this report is listed at <https://www.energy.ca.gov/altfuels/documents/index.html>.

The Energy Commission encourages comments by email. Please include your name or organization's name in the name of the file. Send comments in either Microsoft® Word format (.doc) or in Adobe® Acrobat® format (.pdf) to FTD@energy.ca.gov.

The public can email comments to FTD@energy.ca.gov or send them to:

California Energy Commission
Fuels and Transportation Division
1516 Ninth Street, MS-44
Sacramento, CA 95814-5512

All written comments will become part of the public record and may be posted to the Internet.

News media should direct inquiries to the Media and Public Communications Office at (916) 654-4989 or by email at mediaoffice@energy.ca.gov.

CHAPTER 2:

Project Description

Energy Commission staff requested that applicants provide LHI information on their proposed projects during the GFO-18-602 grant funding solicitation. Staff analyzed project descriptions, project site address, expected emissions, potential community health impacts, and community outreach efforts from the proposed awardees to generate this LHI report. This chapter describes the projects proposed by staff to receive ARFVTP funding under GFO-18-602 and summarizes the LHI information findings.

California Grinding, Inc. – Thermophilic Demonstration

California Grinding, Inc. proposes to construct an anaerobic digestion system at 3077 South Golden State Frontage Blvd. in Fresno. Upon completion, the system will use an estimated 75,000 tons of organic waste (that is, food waste, manure, compost) and convert them to 2.4 million diesel gallons equivalent (DGE) of renewable natural gas (RNG) each year. The proposed awardee will use innovative anaerobic digesting technologies that increase the conversion efficiency of organic waste to biomethane by 40 percent. California Grinding will market the RNG primarily to city-owned compressed natural gas (CNG) fleet vehicles.

The proposed awardee does not expect a net increase in criteria emissions from the RNG production system. This demonstration project would provide a scalable alternative to sending organic waste to landfills, where they would generate toxic emissions; however, organic waste feedstock transportation to the project site will create some local air pollution. Assuming a 25-mile market radius, 20 tons per truckload, and 90,000 tons per year of organic waste, the expected air pollutant emissions rates for reactive organic gases (ROGs), nitrogen oxides (NO_x), particulate matter 2.5 microns in diameter or less (PM_{2.5}), particulate matter 10 microns in diameter (PM₁₀), and carbon dioxide (CO₂) are in Table 2.

Table 2: California Grinding, Inc. Project-Related Emissions

Emission Source	ROG (lbs./year)	NOx (lbs./year)	PM _{2.5} (lbs./year)	PM ₁₀ (lbs./year)	CO ₂ (lbs./year)
Feedstock Transportation	37	277	21	54	1,138,193
Production Process	-	-	-	-	-
Total	37	277	21	54	1,138,193

Source: California Grinding, Inc.

Southern California Gas Company – HYPOWERS

Southern California Gas Company (SoCalGas) proposes a demonstration project of a skid-mounted biofuel production system (biofuel system) at the Central Contra Costa Sanitary District Wastewater Treatment Plant (WWTP) at 5019 Imhoff Place in Martinez. This project will use WWTP organic waste and produce an estimated 109,725 DGE of renewable biodiesel and 1,174 DGE of RNG each year. This project seeks primarily to demonstrate a cost-effective process for WWTP municipalities to dispose of their organic waste that would otherwise go to landfills.

During construction of this project, trenching, concrete work, gas plumbing, and electrical work will occur at the project site. Since this is a demonstration-scale production system, no changes in pollutant emission are expected to occur. Outreach by the proposed awardee will come in the form of publishing information about the project in a quarterly newsletter reaching roughly 380,000 residents. SoCalGas reported no project-related emission rates.

Technikon, LLC – Hyper-Philic RNG Demonstration

Technikon, LLC proposes an anaerobic digestion (AD) technology demonstration project at the Atlas Disposal Fueling Station at 8550 Fruitridge Road in Sacramento. The project aims to demonstrate a method to reduce the time needed for converting organic waste into biomethane using a newly developed two-stage pretreatment process. About eight tons of organic waste will produce 200 DGE of fuel-grade RNG. If the new process can demonstrate the capacity to scale up, it can provide municipalities a cost-effective and low-carbon emission alternative to sending organic waste to landfills.

The applicant expects there will be some emissions generated when demonstrating its production process. The project will also require feedstock shipments of organic waste to the project site via trucks. The applicant estimates 10 miles per day worth of vehicle emissions during feedstock transportation. The NO_x, PM_{2.5}, PM₁₀, volatile organic compound (VOC), total hydrocarbons (THC), carbon monoxide (CO), and CO₂ emissions calculations for this project are in Table 3 in grams per day instead of yearly, as this project is primarily to demonstrate scalability and is not for commercial purposes.

Table 3: Technikon, LLC Project-Related Emissions

Emission Source	NO _x (grams per day)	PM _{2.5} (grams per day)	PM ₁₀ (grams per day)	VOC (grams per day)	THC* (grams per day)	CO** (grams per day)	CO ₂ (grams per day)
Feedstock Transportation	46	1	1	3	3	12	-
Production Process	-	-	-	-	-	-	238
Total	46	1	1	3	3	12	238

Source: Technikon, LLC staff

Oberon Fuels, Inc. – Renewable DME

Oberon Fuels, Inc. proposes to upgrade its existing dimethyl ether (DME) production plant from pilot scale to demonstration scale. The project site is at 5451 Kershaw Rd in Brawley (Imperial County). The project site is adjacent to a railroad, cattle feedlot, agricultural land, and an industrial plant. There are no homes, day care centers, elder care centers, hospitals or medical offices, or schools within a half-mile of the project location. The existing DME plant had a conditional use permit issued in 2013 for production volumes up to 4,500 gallons per day of DME. Findings during the permit process deemed that toxic emissions are under the thresholds established by the Imperial County Air Pollution Control District.

Upon completion, Oberon Fuels Inc.'s DME production plant will have a production capacity of 1.6 million DME gallons per year. The proposed awardee does not expect a net increase in criteria emissions from increasing to demonstration-scale production. The project stands to reduce carbon emissions by providing DME as a low-carbon fuel alternative. Oberon Fuels, Inc. reported no project related emission rates, as it does not expect a net increase in criteria emissions from this project.

Technology & Investment Solutions – In-Situ Biomethanation

Five Points Pipeline, LLC proposes a biomethane upgrading system demonstration project that can convert food waste into vehicle-grade biomethane. The project site is at Meadowbrook Dairy, 17900 Sheep Creek Rd in Phelan (San Bernardino County). The in-situ biomethane production process uses CO₂-enriched biogas as a catalyst to produce higher methane content biomethane during production. The CO₂-capturing process also provides an alternative to burning off organic waste gases, which produce harmful emissions. This project would demonstrate a method to enrich biomethane more efficiently and reduce the operational and capital costs associated with existing biomethane processing systems. Technology & Investment Solutions reported no project related emission rates, as it does not expect a net increase in criteria emissions from this project.

CHAPTER 3:

Location Analysis

Under the *California Code of Regulations Title 13 (CCR § 2343)*, this LHI report describes the hydrogen infrastructure project proposed for ARFVTP funding that may require a conditional use permit, discretionary permit, or California Environmental Quality Act (CEQA) review. The Energy Commission interprets “permits” to suggest discretionary and conditional use permits because they require a review of potential impacts to communities and the environment before issuance.

This LHI report analyzes project locations by applying staff’s interpretation of the Environmental Justice Screening Method (EJSM).³ A proposed project location must meet a two-part environmental and demographic standard for staff to identify a location as high-risk community project location. The environmental standard uses the California Air Resources Board (CARB) air quality monitoring data on nonattainment⁴ status for areas with a high concentration of air pollutants. The demographic standard uses data from the Employment Development Department’s *Monthly Labor Force Data*⁵ and the U.S. Census Bureau’s *American Community Survey*⁶ data on age, poverty, race, and unemployment. The city name, along with demographic information for the proposed project location under GFO-18-602, is in Table 4 of this LHI report.

Environmental Standard

Based on CARB air quality monitoring data,⁷ the projects proposed in Brawley, Fresno, Martinez, Phelan, and Sacramento are within nonattainment zones for either ozone, PM_{2.5}, or PM₁₀. These communities have met staff’s environmental standard for poor air quality by having potentially high concentration levels of air pollutants for their designated areas.

Demographic Standard

The demographic information for the communities identified under grant solicitation GFO-18-602 is listed in Table 4 by city name. If a project within a nonattainment zone

3 California Air Resources Board, *Air Pollution and Environmental Justice, Integrating Indicators of Cumulative Impact and Socio-Economic Vulnerability Into Regulatory Decision-Making*, 2010. (Sacramento, California) Contract authors: Manuel Pastor Jr., Ph.D., Rachel Morello-Frosch, Ph.D., and James Sadd, Ph.D.

4 *Nonattainment status* (or zones) are areas designated by the California Air Resources Board with at least one violation of an air quality standard for pollutants within the last three years, as of June 2017. Available at <https://www.arb.ca.gov/desig/desig.htm>.

5 <https://www.labormarketinfo.edd.ca.gov/file/lfmonth/countyur-400c.pdf>.

6 https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml.

7 <https://www.arb.ca.gov/desig/adm/adm.htm>.

has more than one EJ indicator (shown in Table 1), staff will identify it as a high-risk community project location. The city name of a high-risk community is listed in Table 10 with red font, and the percentage value of the EJ indicator threshold(s) exceeded is highlighted in yellow. For example, staff identifies the project location in Brawley as a high-risk community project location because it is within a nonattainment zone for poor air quality and exceeds the EJ indicator threshold for poverty level, a large minority population, and unemployment. For more information on the EJSM and EJ indicator criteria, please see Appendix A of this LHI report.

Table 4: EJ Indicators by Project Location City Demographic

	Below Poverty (2017)	Black or African American (2017)	American Indian and Alaska Native (2017)	Asian and Native Hawaiian and Pacific Islander (2017)	Hispanic or Latino Race (2017)	Persons Under 5 Years of Age (2017)	Persons Over 65 Years of Age (2017)	Unemployment (December 2018)
California	11.1%	5.8%	0.7%	14.5%	38.8%	6.4%	13.2%	3.9%
EJ Indicator Threshold	>11.1%	>30%	>30%	>30%	>30%	≥26.4%	≥33.2%	>3.9%
Brawley	24.7%	5.8%	0.5%	12.9%	52.4%	6.1%	10.2%	17.3%
Fresno	23.2%	1.5%	0.6%	1.5%	82.1%	9.5%	12.6%	7.5%
Martinez	3.6%	3.4%	0.5%	8.3%	15.9%	5.2%	15.1%	3.0%
Phelan	11.1%	4.7%	0.4%	4.0%	34.2%	8.5%	14.4%	3.8%
Sacramento	15.3%	13.4%	0.7%	20.3%	28.3%	6.8%	12.2%	3.7%

Sources: California Energy Commission staff, Employment Development Department, and U.S. Census Bureau. *The city/county names in red indicate a high-risk community, while the yellow highlighted percentages indicate which categories exceed the EJ indicator threshold. **An asterisk (*) may signify a default to county-level data

Analysis Summary

Based on EJSM standards for suggested environmental and demographic standard, staff has identified the project locations in Brawley, Fresno, and Sacramento as high-risk community project locations. Staff does not anticipate significant increases in criteria and toxic emissions from implementing any of the proposed projects. Based on staff analysis, there are no anticipated adverse health impacts on local communities from implementing these projects.

GLOSSARY

AIR QUALITY IMPROVEMENT PROGRAM – Established by the California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007 (AB 118, Núñez, Statutes of 2007, Chapter 750), is a voluntary incentive program administered by CARB to fund clean vehicle and equipment projects and research of biofuels production.

BIOMETHANE – A pipeline-quality gas that is interchangeable with conventional natural gas and can be used as a transportation fuel to power natural gas engines. Biomethane is commonly produced through an anaerobic digestion or gasification process using various biomass sources.

CALIFORNIA CODE OF REGULATIONS – The official compilation and publication of the regulations adopted, amended, or repealed by state agencies under the Administrative Procedure Act (APA). Properly adopted regulations that have been filed with the Secretary of State have the force of law.

CARBON DIOXIDE EQUIVALENT – A measure used to compare emissions from various greenhouse gases based upon the associated global warming potential. The carbon dioxide equivalent for a gas is derived by multiplying the mass of the gas by the associated global warming potential.

CALIFORNIA ENVIRONMENTAL QUALITY ACT – A statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible.

COMPRESSED NATURAL GAS – A pressurized hydrocarbon gas composed of methane, ethane, butane, propane, and other gases.

CRITERIA AIR POLLUTANT – An air pollutant for which acceptable levels of exposure can be determined and for which the U.S. Environmental Protection Agency has set an ambient air quality standard. Examples include ozone (O₃), carbon monoxide (CO), nitrogen oxides (NO_x), sulfur oxides (SO_x), and particulate matter (PM₁₀ and PM_{2.5}).

ENVIRONMENTAL JUSTICE – The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

ENVIRONMENTAL JUSTICE SCREENING METHOD – A screening approach for combining environmental and demographic indicators to inform agency outreach and engagement practices regarding environmental justice.

ETHANOL - A liquid that is produced chemically from ethylene or biologically from the fermentation of various sugars from carbohydrates found in agricultural crops and cellulosic residues. Used in the United States as a gasoline octane enhancer and oxygenate or in higher concentration (E85) in flex-fuel vehicles.

FEEDSTOCK - Any material used directly as a fuel or converted into fuel. Biofuel feedstocks are the original sources of biomass. Examples of biofuel feedstocks include corn, crop residue, and waste food oils.

GRANT FUNDING OPPORTUNITY - Where the Energy Commission offers applicants an opportunity to receive grant funding for projects meeting the solicitation requirements.

GREENHOUSE GAS - Any gas that absorbs infrared radiation in the atmosphere. Common examples of greenhouse gases include water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), halogenated fluorocarbons (HCFCs), ozone (O₃), perfluorinated carbons (PFCs), and hydrofluorocarbons (HFCs).

LANDFILL GAS - Gas generated by the natural degradation and decomposition of municipal solid waste by anaerobic microorganisms in sanitary landfills. The gases produced, carbon dioxide and methane, can be collected by a series of low-level pressure wells and can be processed into a medium British thermal unit (Btu) gas that can be further processed into a transportation fuel or combusted to generate heat or electricity.

LOCALIZED HEALTH IMPACTS - Potential project-related health impacts from Energy Commission-funded projects.

METHANE - A light hydrocarbon that is the main component of natural gas. It is the product of the anaerobic decomposition of organic matter or enteric fermentation in animals and is a greenhouse gas. The chemical formula is CH₄.

NO_x - Oxides of nitrogen, a chief component of air pollution that is commonly produced by the burning of fossil fuels.

PARTICULATE MATTER - Any material, except pure water, that exists in a solid or liquid state in the atmosphere. The size of particulate matter can vary from coarse, wind-blown dust particles to fine-particle combustion products.

LIST OF ACRONYMS

AB	Assembly Bill
AQIP	Air Quality Improvement Program
ARFVTP	Alternative and Renewable Fuel and Vehicle Technology Program
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CNG	compressed natural gas
CO	carbon monoxide
CO ₂	carbon dioxide
DGE	diesel gallon equivalent
EBMUD	East Bay Municipal Utility District
EJ	environmental justice
EJSM	Environmental Justice Screening Method
GFO	grant funding opportunity
GHG	greenhouse gas
MADRE 1	Madera Renewable Energy One
NO _x	nitrogen oxide
PM _{2.5}	particulate matter; 2.5 microns or smaller in diameter
PM ₁₀	particulate matter; 10 microns in diameter
PGWWTP	Pleasant Grove Wastewater Treatment Plant
RNG	renewable natural gas
ROG	reactive organic gases
SB	Senate Bill
SO ₂	sulfur dioxide
THC	total hydrocarbons
U.S. EPA	United States Environmental Protection Agency
VOC	volatile organic compound
WWTP	wastewater treatment plant

APPENDIX A:

Localized Health Impacts Report Method

This LHI report assesses the potential health impacts on communities from projects proposed to receive ARFVTP funding. This LHI report is prepared under the *California Code of Regulations, Title 13, Motor Vehicles, Chapter 8.1 (CCR § 2343)*:

“(6) Localized health impacts must be considered when selecting projects for funding. The funding agency must consider EJ consistent with state law and complete the following:

(A) For each fiscal year, the funding agency must publish a staff report for review and comment by the public at least 30 calendar days prior to the approval of projects. The report must analyze the aggregate locations of the funded projects, analyze the impacts in communities with the most significant exposure to air contaminants or localized air contaminants, or both, including, but not limited to, communities of minority populations or low-income populations, and identify agency outreach to community groups and other affected stakeholders.

(B) Projects must be selected and approved for funding in a publicly noticed meeting.”

This LHI report is not intended to be a detailed pollution analysis of proposed projects nor is it intended to substitute for the environmental review conducted during CEQA. This LHI report includes staff’s application of the EJSM developed by the U.S. EPA to help identify projects in areas where social vulnerability indicators, high exposure to pollution, and greater health-risks are present.

Energy Commission staff identifies high-risk community project locations using data from CARB, the U.S. Census Bureau, and other public agencies. Staff analyzes these data to assign EJ indicators for each project location specified in the LHI report. The proposed project location must meet a two-part standard as follows:

Part 1 – Environmental Standard:

- Communities located within an air quality nonattainment zone for ozone, PM 2.5, or PM 10, as designated by the California Air Resources Board for criteria pollutants.

Part 2 – Demographic Standard:

- Communities having more than one of the following EJ indicators for (1) minority, (2) poverty, (3) unemployment, and (4) age. The EJ indicator thresholds is defined by staff as:
 - 1) A minority subset represents more than 30 percent of a given city’s population.

- 2) A city's poverty level exceeds the state average poverty level.
- 3) The city (or county if city data is unavailable) unemployment rate exceeds the state average unemployment rate.
- 4) The percentage of people living in a city who are younger than 5 years of age or older than 65 years of age is 20 percent higher than the state average for persons under 5 years of age or over 65 years of age.